



## ADVANCED MANUFACTURING

### ***Blueprint for Action: Workshop on the Design of the National Network for Manufacturing Innovation (NNMI)***

**Davidson Center for Space Exploration ♦ U.S. Space and Rocket Center ♦  
Huntsville, AL**

**January 16, 2013**

### **Participant Advance Information – PLEASE PRINT!**

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#### **Logistics**

<b>Workshop Times</b>	Wednesday, Jan. 16, 2013 <i>See page 5 for the Workshop agenda</i>	7:00 am CST— Registration Check-in (Lobby, Davidson Center) 8:00 am CST— Call to Order (Auditorium) 5:00 pm CST— Workshop Adjourns
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<b>Food and Beverages</b>	Your registration fee includes a southern breakfast beginning at 7:00 am Central time, morning break, a working buffet lunch and an afternoon beverage break.
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<b>Workshop Location</b>	U.S. Space and Rocket Center, Davidson Center for Space Exploration, <a href="http://rocketcenter.com/">http://rocketcenter.com/</a> One Tranquility Base, Huntsville, Alabama 35805 (1-800-637-7223)
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<b>Hotel</b>	Workshop participants may select from a number of local hotels. A special rate has not been negotiated with area hotels. Visit the following website for a listing of area hotels: <a href="http://www.manufacturing.gov/docs/huntsville_area_hotels.pdf">http://www.manufacturing.gov/docs/huntsville_area_hotels.pdf</a>
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<b>Directions and Parking</b>	The U.S. Space and Rocket Center, Davidson Center for Space Exploration, is conveniently located at One Tranquility Base, Huntsville, Alabama 35805. Use Exit 15 off I-565 to access parking and the workshop location. Parking is available on-site at no charge. For parking at the Davidson Center, drive past the SR-71 on display at the main museum, turn left into the parking lot in front of the Davidson Center.
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<b>Website</b>	Detailed directions and maps to get to the U.S. Space and Rocket Center, Davidson Center for Space Exploration may be found online at: <a href="http://www.spacecamp.com/mu/directions">http://www.spacecamp.com/mu/directions</a> . The Davidson Center is identified at the lower left (southwest) portion of the U.S. Space and Rocket Center campus.
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#### **Workshop Organizer and Hosts**

<b>Organizer and Hosts</b>	The interagency Advanced Manufacturing National Program Office (AMNPO), Department of Defense, NASA, and the University of Alabama in Huntsville
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<b>Coordinating Agencies</b>	Department of Commerce and its National Institute of Standards and Technology (NIST), Department of Defense, Department of Education, Department of Energy's Advanced Manufacturing Office, Department of Labor, NASA, and the National Science Foundation
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## Workshop Pre-read Materials

**ATTENTION: Your advance copy of the *National Network for Manufacturing Innovation - A Preliminary Design* will be provided to all registrants no later than Tuesday, January 15<sup>th</sup>. This document is EMBARGOED until January 16<sup>th</sup>. DO NOT SHARE, COPY or DISTRIBUTE!**

Workshop participants should familiarize themselves thoroughly with the materials referenced below, *in advance*, to maximize their participation and to be best prepared to engage in workshop discussions.

- ***National Network for Manufacturing Innovation – A Preliminary Design*** – registrant’s advance copy to be sent no later than January 15<sup>th</sup> and publicly available at <http://www.manufacturing.gov> on January 16<sup>th</sup>.
- **RFI Responses & Reports from the NNMI *Design for Impact* workshop series** – On May 4, 2012, the Advanced Manufacturing National Program Office published a Request for Information (RFI) in the Federal Register inviting interested parties to provide public comment on the proposed new NNMI public-private partnership program. In total, a total of seventy-eight (78) separate responses were received from industry, academia, economic development, state and regional authorities, national laboratories, and private citizens, representing the viewpoints of nearly 107 separate entities.

In addition, the AMNPO also held four *Designing for Impact* regional workshops as part of its strategy for soliciting nation-wide input on building the NNMI. The four regional workshops attracted 875 attendees from across the country, from industry; academia; economic development organizations; state, local and federal government; and others. The RFI responses and workshop reports are available at: [http://www.manufacturing.gov/rfi\\_responses.html](http://www.manufacturing.gov/rfi_responses.html).

- **Backgrounder: *About the National Network for Manufacturing Innovation*** – attached to this package and available online at: [http://www.manufacturing.gov/nnmi\\_overview.html](http://www.manufacturing.gov/nnmi_overview.html).

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## Workshop Objective and Topics

The *Blueprint for Action: Workshop on the Design of the National Network for Manufacturing Innovation (NNMI)* is the first in a new series of workshop events to be held across the nation. We expect over 250 attendees in Huntsville from around the country and region.

The workshop objective is to provide a forum for the AMNPO to present and discuss the preliminary design of the NNMI and its regional components, Institutes for Manufacturing Innovation (IMIs); to review public comments received by the AMNPO in response to the May 4, 2012 Request for Information on the proposed NNMI; to update participants on the NNMI initiative; and to outline anticipated next steps.

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## Workshop Format and Process

**Plenary Presentations and Panel:** Participants will hear welcoming remarks from the workshop host, followed by plenary presentations. Invited speakers from the Department of Defense, the National Institute of Standards and Technology (NIST), and the Advanced Manufacturing National Program Office will offer federal perspectives on the proposed NNMI and related activities. A subsequent plenary panel discussion featuring regional advanced manufacturing leaders will offer perspectives in building technology clusters and private-public partnerships.

**Facilitated Cafés:** A team composed of two federal agency representatives, professional facilitator, and scribes will support the afternoon Café discussions. Each workshop registrant will participate in two Café periods covering all four design elements. *Your Café room assignments will be indicated on the attendee list in your registration package.* Participants will engage in active discussion, and will have the opportunity to provide individual inputs. Discussion topics for each Café are shown below. Café worksheets will be provided in your registration package and should be turned in to facilitators prior to leaving the café session.

### **Café Discussion Topics:**

**Based upon the concepts presented within the *National Network for Manufacturing Innovation - A Preliminary Design*, how would you address the following topics?**

#### **Technologies with Broad Impact**

- 1) How could a proposing team select a well-defined focus area that meets both industry and national needs? What metrics could be used to help justify the selected focus area(s) and scale of effort?
- 2) How would you design an Institute with a regional focus and position the Institute to create national/international technical preeminence? Is it possible to do this with an industry, technology, or process and product focused Institute agenda?

#### **Institute Structure and Governance**

- 1) The NNMI preliminary design calls for an Institute to be led by an independent, not-for-profit organization. How then should an Institute leverage academic and regional resources, interface effectively with these and other key stakeholders, and manage intellectual property obligations?
- 2) How should participation by non-domestic organizations be managed to maximize impact to the United States? For example, how might an Institute manage participation by a multi-national organization? Should a non-domestic organization participate in or lead a project?

#### **Strategies for Sustainable Institute Operations**

- 1) How can an Institute sustain its operations beyond the 5-7 year mark?
  - a. How can an Institute unlock private investment? What strategies could be followed to attract partners, with particular attention to infrastructure and shared-use facilities, training and education, and other Institute “products”?
  - b. What might a sustainable Institute budget look like? How would an Institute’s diverse funding sources evolve with time?
- 2) What might be some go/no-go criteria for uninterrupted flow of NNMI funds to an Institute?

#### **Education and Workforce Development**

- 1) How can an Institute exercise industry leadership with other key stakeholders in workforce training and development?
- 2) How should an Institute be responsive to a region’s workforce development and training priorities, and pursue initiatives that are responsive to the nation’s needs?

***Workshop attendees should familiarize themselves with the materials being provided to maximize their participation and be best prepared to engage in workshop discussions.***

## **Workshop Agenda (near final)**

### ***Blueprint for Action: Workshop on the Design of the National Network for Manufacturing Innovation (NNMI)***

Davidson Center for Space Exploration ♦ U.S. Space and Rocket Center ♦ Huntsville, Alabama  
January 16, 2013

7:00 am    **Registration and Southern Breakfast** (Lobby, Davidson Center for Space Exploration)

#### **Plenary Session** (Davidson Center Auditorium)

8:00 am    ***Call to Order***  
Adele Ratcliff, Director, Manufacturing Technology, Department of Defense

8:05 am    ***Welcoming Addresses***  
**University of Alabama in Huntsville**  
 Robert A. Altenkirch, President  
 The University of Alabama in Huntsville

**NASA Marshall Space Flight Center**  
 Patrick Scheuermann, Center Director  
 NASA Marshall Space Flight Center

#### **Keynote Addresses** (Davidson Center Auditorium)

8:20 am    **Department of Defense Perspective: The Importance of an Advanced, Resilient Manufacturing Base**  
 Brett B. Lambert, Deputy Assistant Secretary of Defense  
 Manufacturing and Industrial Base Policy

8:40 am    **Private/Public Partnerships That Support Technology Clusters**  
 Phillip Singerman, Associate Director for Innovation and Industry Services  
 National Institute of Standards and Technology (NIST)

9:00 am    **The Proposed NNMI Design and Selection Process**  
 Mike Molnar, Director, Advanced Manufacturing National Program Office

9:40 am    **Break**

10:00 am    **NNMI Design Characteristics**

1. *Technologies with Broad Impact*  
Scott Smith, AMNPO
2. *Institute Structure and Governance*  
LaNetra Tate, NASA
3. *Strategies for Sustainable Institute Operations*  
Adele Ratcliff, Department of Defense
4. *Education and Workforce Development*  
Greg Henschel, Department of Education

12:00 pm    **Today's Design Cafés**  
 Mike Molnar, Director, Advanced Manufacturing National Program Office

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**Lunch Program** (Saturn Hall)

12:10 pm **Lunch and Networking**

12:55 pm ***Plenary Panel***

**Perspectives in Building Technology Clusters**

**Moderator and Panelist:**

- Rebecca Taylor, Senior Vice President, National Center for Manufacturing Sciences (NCMS)

**Panelists:**

- Ron Davis, President, Alabama Automotive Manufacturers Association (AAMA)
- Jennifer Fielding, Deputy Program Manager, Defense-wide Manufacturing Science and Technology, Air Force Research Laboratory (AFRL)
- Ralph Resnick, President and Executive Director, National Center for Defense Manufacturing and Machining (NCDMM)
- Bethany Clem Shockney, Dean, Business/CIS, Technologies & Workforce Development, Calhoun Community College

1:55 pm **Army, Local Host Remarks**

MG William Crosby, PEO Aviation

Aviation and Missile Command (AMCOM)

2:00 pm Disperse for Cafés

**Design Cafés**

2:10 pm **Café Period I – Design Characteristics 1, 2**

*Café 1:* Davidson Center, Auditorium

*Café 2:* Davidson Center, Classroom

*Café 3:* Main Museum Building, Mars Grill

*Café 4:* Main Museum Building, Discovery Theatre

3:10 pm **Break** (Davidson Center, and Main Museum Building)

3:30 pm **Café Period II – Design Characteristics 3, 4**

*Café 1:* Davidson Center, Auditorium

*Café 2:* Davidson Center, Classroom

*Café 3:* Main Museum Building, Mars Grill

*Café 4:* Main Museum Building, Discovery Theatre

4:30 pm Reassemble for Closing Plenary

4:45 pm **2013 Next Steps and Concluding Remarks** (Davidson Center Auditorium)

Mike Molnar, Director, Advanced Manufacturing National Program Office

5:00 pm **Workshop Adjourns**

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## **Backgrounder:**

### ***About the National Network for Manufacturing Innovation***

#### **The National Network for Manufacturing Innovation (NNMI)**

In his budget for fiscal year 2013, the President proposes creating a network of regional Institutes for Manufacturing Innovation (IMIs or institutes). Funded by a proposed one-time, \$1 billion investment, this network - the National Network for Manufacturing Innovation (NNMI or network) - responds to a crucial competitiveness challenge and threat to future prosperity: Closing the gap between research and development (R&D) activities and the deployment of technological innovations in domestic production of goods.

The proposed NNMI will be composed of IMIs around the country, each serving as a hub of manufacturing excellence that will help to make United States (U.S.) manufacturing facilities and enterprises more competitive and encourage investment in the United States.

The network and its individual IMIs will enable companies to collaborate and access the capabilities of our research universities and other science and technology organizations to support scaling up manufacturing and assembly processes. At the same time, the IMIs will help to meet the challenge of building the pool of high-skilled talent that advanced manufacturing requires.

#### **Institutes for Manufacturing Innovation (IMIs)**

The NNMI will consist of dynamically linked regional clusters of manufacturing innovation. An IMI - each with its own technology focus - will leverage and expand the industrial, research, and institutional strengths of the region. The Institute will be a central element, designed to catalyze collaboration and maximize shared infrastructural resources. The focus of each Institute will be unique, determined through a competitive application process, but all IMIs will concentrate on adopting, refining, and applying promising emerging technologies.

In bridging the gap between applied research and product development, IMIs will provide shared assets to help companies gain access to cutting-edge capabilities and equipment, and to educate and train students and workers in advanced manufacturing skills. Over a specified period, each IMI will become a self-sustaining technical center of excellence.

As nodes of a network, IMIs will synergistically complement each other and benefit from shared approaches to such matters as intellectual property, contract research, and performance metrics. While the institutes will be regionally focused, the network will be national, integrated, and dynamic, aiming to fostering innovation and delivering new capabilities that can impact the manufacturing sector on a large scale.